

**Amendments to the Claims**

The following listing of claims replaces all prior versions of the claims and all prior listings of the claims in the present application.

1-48. (canceled)

49. (new) A tyre for a two-wheeled vehicle, comprising:

a carcass structure;

a belt structure;

a tread band; and

a pair of sidewalls;

wherein the carcass structure comprises at least one carcass ply shaped in a substantially toroidal configuration,

wherein opposite lateral edges of the carcass structure are associated with respective bead wires,

wherein each bead wire is enclosed in a respective bead,

wherein the belt structure is disposed in a circumferentially external position relative to the carcass structure;

wherein the tread band is superimposed circumferentially on the belt structure;

wherein the side walls are applied laterally on opposite sides relative to the carcass structure,

wherein the belt structure is associated with at least one layer of a crosslinked elastomeric material, and

wherein the elastomeric material comprises:

at least one diene elastomeric polymer; and

at least one layered inorganic material comprising an individual layer thickness  
from 0.01 nm to 30 nm.

50. (new) The tyre of claim 49, wherein the at least one layered inorganic material comprises an individual layer thickness from 0.05 nm to 15 nm.

51. (new) The tyre of claim 49, wherein the at least one layered inorganic material is intercalated in the elastomeric material.

52. (new) The tyre of claim 49, wherein the at least one layered inorganic material is exfoliated in the elastomeric material.

53. (new) The tyre of claim 49, wherein the at least one layered inorganic material exhibits, in the elastomeric material, a d-spacing value in X-ray diffraction analysis at least 10% higher than the d-spacing value of the at least one layered inorganic material before dispersing the at least one layered inorganic material into the at least one diene elastomeric polymer.

54. (new) The tyre of claim 49, wherein the at least one layered inorganic material exhibits, in the elastomeric material, a d-spacing value in X-ray diffraction analysis at least 20% higher than the d-spacing value of the at least one layered inorganic material before dispersing the at least one layered inorganic material into the at least one diene elastomeric polymer.

55. (new) The tyre of claim 49, wherein the belt structure comprises:  
at least one layer of a plurality of circumferential coils, axially arranged side-by-side, of at least one cord wound at a substantially null angle with respect to an equatorial plane of the tyre.

56. (new) The tyre of claim 49, wherein the belt structure comprises:  
two layers of cords;  
wherein the two layers of cords are inclined with respect to an equatorial plane of the tyre, and  
wherein the cords of a first layer cross the cords of a second layer.

57. (new) The tyre of claim 49, wherein the belt structure comprises:  
at least one layer of a plurality of circumferential coils, axially arranged side-by-side, of at least one cord wound at a substantially null angle with respect to an equatorial plane of the tyre; and  
first and second layers of cords;

wherein the first and second layers of cords are inclined with respect to the equatorial plane of the tyre, and

wherein the cords of the first layer cross the cords of the second layer.

58. (new) The tyre of claim 49, wherein the at least one layer of a crosslinked elastomeric material is disposed between the carcass structure and the belt structure.

59. (new) The tyre of claim 49, wherein the at least one layer of a crosslinked elastomeric material is disposed between the belt structure and the tread band.

60. (new) The tyre of claim 49, wherein the at least one layer of a crosslinked elastomeric material comprises a thickness between 0.075 mm and 5 mm.

61. (new) The tyre of claim 49, wherein the at least one layer of a crosslinked elastomeric material comprises a thickness between 0.4 mm and 3 mm.

62. (new) The tyre of claim 49, wherein the elastomeric material comprises from 1 phr to 120 phr of the at least one layered inorganic material.

63. (new) The tyre of claim 49, wherein the elastomeric material comprises from 5 phr to 80 phr of the at least one layered inorganic material.

64. (new) The tyre of claim 49, wherein the at least one layered inorganic material comprises one or more phyllosilicates.

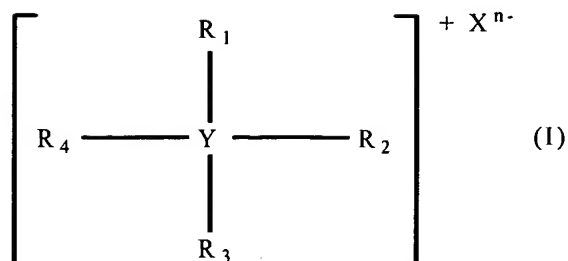
65. (new) The tyre of claim 49, wherein the at least one layered inorganic material comprises one or more of smectite, vermiculite, halloysite, and sericite.

66. (new) The tyre of claim 49, wherein the at least one layered inorganic material comprises one or more of montmorillonite, nontronite, beidellite, volkonskoite, hectorite, saponite, and sauconite.

67. (new) The tyre of claim 49, wherein the at least one layered inorganic material comprises montmorillonite.

68. (new) The tyre of claim 64, wherein the at least one layered inorganic material is surface-treated with a compatibilizer.

69. (new) The tyre of claim 68, wherein the compatibilizer is selected from quaternary ammonium or phosphonium salts having general formula (I):



wherein:

Y represents nitrogen or phosphorous;

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, and R<sub>4</sub>, which may be identical or different, represent a linear or branched C<sub>1</sub>-C<sub>20</sub> alkyl or hydroxyalkyl group; a linear or branched C<sub>1</sub>-C<sub>20</sub> alkenyl or hydroxyalkenyl group; a group -R<sub>5</sub>-SH or R<sub>5</sub>-NH, wherein R<sub>5</sub> represents a linear or branched C<sub>1</sub>-C<sub>20</sub> alkylene group; a C<sub>6</sub>-C<sub>18</sub> aryl group; a C<sub>7</sub>-C<sub>20</sub> arylalkyl or alkylaryl group; a C<sub>5</sub>-C<sub>18</sub> cycloalkyl group, the cycloalkyl group possibly containing at least one heteroatom selected from oxygen, nitrogen, and/or sulfur;

X<sup>n-</sup> represents an anion such as the chlorine ion, the sulphate ion or the phosphate ion;

n represents 1, 2, or 3.

70. (new) The tyre of claim 49, wherein the at least one diene elastomeric polymer has a glass transition temperature (T<sub>g</sub>) below 20° C.

71. (new) The tyre of claim 70, wherein the at least one diene elastomeric polymer comprises one or more of: cis-1,4-polyisoprene; 3,4-polyisoprene; polybutadiene; optionally halogenated isoprene/isobutene copolymers; 1,3-butadiene/acrylonitrile copolymers; styrene/1,3-

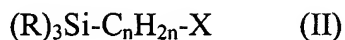
butadiene copolymers; styrene/isoprene/1,3-butadiene copolymers; and styrene/1,3-butadiene/acrylonitrile copolymers.

72. (new) The tyre of claim 49, wherein the elastomeric material further comprises at least one elastomeric polymer of one or more monoolefins with an olefinic comonomer or derivatives thereof.

73. (new) The tyre of claim 72, wherein the at least one elastomeric polymer of one or more monoolefins comprises one or more of: ethylene/propylene copolymers (EPR) or ethylene/propylene/diene copolymers (EPDM); polyisobutene; butyl rubbers; and halobutyl rubbers.

74. (new) The tyre of claim 49, wherein the elastomeric material further comprises at least one silane coupling agent.

75. (new) The tyre of claim 74, wherein the at least one silane coupling agent is selected from those having at least one hydrolizable silane group which may be identified by structural formula (II):



in which the groups R, which may be identical or different, are selected from: alkyl, alkoxy or aryloxy groups or from halogen atoms, on condition that at least one of the groups R is an alkoxy or aryloxy group; n is an integer between 1 and 6 inclusive; X is a group selected from: nitroso, mercapto, amino, epoxide, vinyl, imide, chloro, and  $-(S)_mC_nH_{2n}-Si-(R)_3$ , in which m and n are integers between 1 and 6 inclusive and the groups R are defined as above.

76. (new) The tyre of claim 74, wherein the elastomeric material further comprises from 0.01 phr to 10 phr of the at least one silane coupling agent.

77. (new) The tyre of claim 74, wherein the elastomeric material further comprises from 0.5 phr to 5 phr of the at least one silane coupling agent.

78. (new) The tyre of claim 49, wherein the elastomeric material further comprises at least one additional reinforcing filler in an amount between 0.1 phr and 120 phr.

79. (new) The tyre of claim 78, wherein the at least one additional reinforcing filler comprises carbon black.

80. (new) The tyre of claim 78, wherein the at least one additional reinforcing filler comprises silica.



81. (new) The tyre of claim 80, wherein the elastomeric material further comprises at least one silane coupling agent.

82. (new) A process for producing a tyre for a two-wheeled vehicle, comprising:  
manufacturing the tyre by assembling at least one carcass ply, a belt structure, and a tread;  
associating at least one layer of a crosslinkable elastomeric material with the belt structure;  
subjecting the tyre to moulding in a cavity formed in a vulcanization mould; and  
subjecting the tyre to crosslinking by heating;  
wherein the belt structure is assembled in a circumferentially outer position with respect to the at least one carcass ply,  
wherein the tread is assembled in a circumferentially outer position with respect to the belt structure, and  
wherein the elastomeric material comprises:  
at least one diene elastomeric polymer; and  
at least one layered inorganic material comprising an individual layer thickness  
from 0.01 nm to 30 nm.

83. (new) The process of claim 82, wherein the at least one layered inorganic material comprises an individual layer thickness from 0.05 nm to 15 nm.

84. (new) The process of claim 82, wherein the at least one layered inorganic material is intercalated in the elastomeric material.

85. (new) The process of claim 82, wherein the at least one layered inorganic material is exfoliated in the elastomeric material.

86. (new) The process of claim 82, wherein the at least one layer of a crosslinkable elastomeric material comprises a thickness between 0.075 mm and 5 mm.

87. (new) The process of claim 82, wherein the at least one layer of a crosslinkable elastomeric material comprises a thickness between 0.4 mm and 3 mm.

88. (new) The process of claim 82, wherein the at least one layered inorganic material exhibits, in the elastomeric material, a d-spacing value in X-ray diffraction analysis at least 10% higher than the d-spacing value of the at least one layered inorganic material before dispersing the at least one layered inorganic material into the at least one diene elastomeric polymer.

89. (new) The process of claim 82, wherein the at least one layered inorganic material exhibits, in the elastomeric material, a d-spacing value in X-ray diffraction analysis at least 20% higher than the d-spacing value of the at least one layered inorganic material before dispersing the at least one layered inorganic material into the at least one diene elastomeric polymer.

90. (new) The process of claim 82, wherein the at least one layer of a crosslinkable elastomeric material is obtained by winding at least one ribbon band of the crosslinkable elastomeric material in side-by-side coils.

91. (new) The process of claim 82, wherein the at least one layered inorganic material comprises one or more phyllosilicates.

92. (new) The process of claim 82, wherein the at least one diene elastomeric polymer has a glass transition temperature ( $T_g$ ) below 20° C.

93. (new) The process of claim 82, wherein the elastomeric material further comprises at least one elastomeric polymer of one or more monoolefins with an olefinic comonomer or derivatives thereof.

94. (new) The process of claim 82, wherein the elastomeric material further comprises at least one silane coupling agent.

95. (new) The process of claim 82, wherein the elastomeric material further comprises at least one additional reinforcing filler in an amount between 0.1 phr and 120 phr.

96. (new) The process of claim 95, wherein the at least one additional reinforcing filler comprises carbon black.

97. (new) The process of claim 95, wherein the at least one additional reinforcing filler comprises silica.

98. (new) The process of claim 97, wherein the elastomeric material further comprises at least one silane coupling agent.